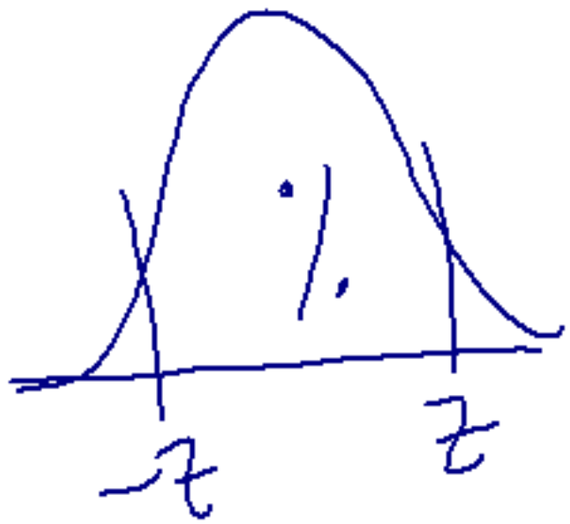
Number	People
#1	Tom, Dan W, Dom, Dan P
#2	Rebecca, Nicole S, John
#3	Britt, Danielle, Vinny, Bill
#4	Kevin R, Nick, Kaycee, Nicole C
#5	Devon, Ryan, Kevin C
#6	Amanda, Lindsay, Cameron, Denny

(3a)

Conf. int = $83.2\% \pm 3\%$

↑ estimate ↑ m.o.e.

$$0.03 = z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$



$$0.03 = z^* \sqrt{\frac{0.832(1-0.832)}{1000}}$$

$z^* = 2.5375$

normcdf(-2.5375, 2.5375, 0, 1) = 98.88%

- $\hat{p} \pm \underbrace{z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$

- M.O.E.
  std. error.

- conf. int smaller
  m.o.e. gets smaller

- ... get a specific m.o.e.

$$m = z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

solving for

Plug:
- m
- z^*
- $\hat{p} = \frac{x}{n}$

problem

8.1:
$n =$

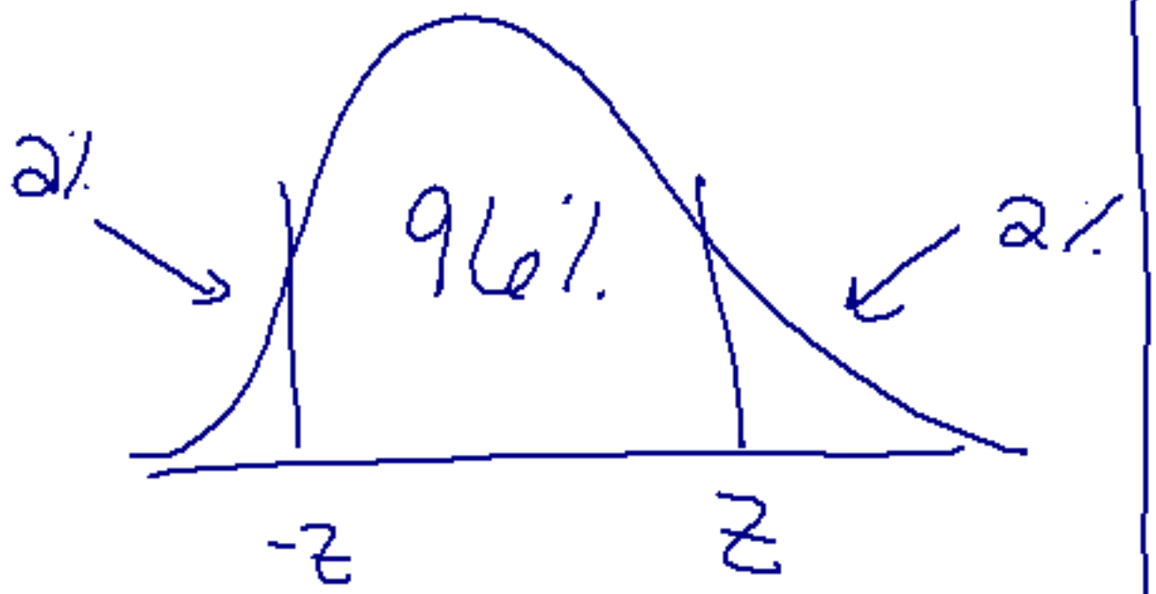
0.50

Answer: Use a known value for $\hat{p}/p$

406

Worksheet: #1, 2, 5 — 829

① $n = z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$



$\frac{0.03}{2.0537} = \frac{2.0537\sqrt{\frac{0.5(0.5)}{n}}}{2.0537}$

$(0.0146\ldots)^2 = \left(\sqrt{\frac{0.25}{n}}\right)^2$

$2.13387 \times 10^{-4} = \frac{0.25}{n}$

$1171.578 = n$

$1172 = n$

Homework:

p. 560 #61

p. 598 #13 & 17